

Application No. 10/805,161
Amendment A
Reply to Office Action of November 23, 2004

Remarks/Arguments

The above-identified application has been carefully reviewed and amended in light of the Examiner's communication mailed November 23, 2004.

Applicant greatly appreciates the Examiner's thorough review of the application. Applicant believes that the present claims, in light of the arguments set forth herein, show the present invention to be patentable.

Independent claims 1 has been amended to incorporate the limitations of claim 8 therein and to more clearly define the invention for which patent protection is sought.

Independent claim 13 have been amended to incorporate the limitations of claim 16 therein and to more clearly define the invention for which patent protection is sought.

New independent claim 18 has been added.

Dependent claim 6 has been amended by deleting the second occurrence of "porous element".

Dependent claim 7 has been amended to substitute "a mulching material" with --the flowable material-- in order to establish proper antecedent basis in light of the amendment to claim 1.

Applicant submits that the amendments to the claims do not add "new matter" to the application, as each of these features is clearly shown in the Drawings and is described in the specification as originally filed.

The Examiner has rejected claims 6 and 13-16 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant submits that

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amended claims 6 and 13 clearly define the invention and satisfy the requirements of 35 U.S.C. 112, second paragraph. Therefore, applicant respectfully requests that the rejection of these claims under 35 USC 112, second paragraph be withdrawn.

The Examiner has rejected claims 1-3, 6-7, 9 and 11-15 under 35 U.S.C. 102(b) as being anticipated by Kim. The Examiner has also rejected claims 4-5, 8, 10, and 16 under 35 U.S.C. 103(a) as being unpatentable over Kim in view of applicant's admission of prior art. Applicant traverses these rejections as pertaining to the claims as amended.

Amended claim 1 is directed to a method of stabilizing a surface. The method comprises disposing a porous element on a surface; depositing a flowable material onto the porous element, the flowable material entering openings defined within the porous element; and allowing the flowable material to solidify within the openings, the porous element and solidified material forming a microclimate on the surface favorable to growth of vegetation. The flowable material comprises a mixture of fibers and a polymeric bonding material.

Amended claim 13 is directed to a system for stabilizing a surface prone to soil erosion. The system comprises a porous element disposed on the surface to be stabilized, and a solidified fiber matrix material incorporated within the porous element. The matrix material comprises a mixture of fibers and a polymeric material. As claimed, the system is made by anchoring the porous element to the surface and thereafter injecting the matrix material into the porous element while the matrix material is in a fluid state and thereafter allowing the matrix material to solidify within openings defined within the porous element.

New claim 18 is directed to a system for stabilizing a surface prone to soil erosion. The system comprises a three-dimensional

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fibrous erosion control blanket disposed a surface and a solidified matrix material bonded to and incorporated within the blanket. The system is made by placing the fibrous erosion control blanket on a surface prone to erosion without the matrix material being incorporated within the blanket, and thereafter hydraulically applying the matrix material to the blanket while the matrix material is in a fluid state and thereafter allowing the matrix material to solidify within the blanket.

Kim teaches a method of growing vegetation on a cut rock slope that includes placing a two-dimensional mesh or two-dimensional net on surface and applying an "artificial soil composition" composed of a) peat, b) sewage sediment, c) pulp sludge, and d) granular soil to the mesh or net.

Kim does not disclose, teach or suggest the present invention. For example, Kim does not disclose, teach or even suggest a method of stabilizing a surface which comprises disposing a porous element on a surface, depositing a flowable material comprising a mixture of fibers and a polymeric bonding material onto the porous element, allowing the flowable material to solidify within said openings, the porous element and the solidified material forming a microclimate on said surface favorable to growth of vegetation, as recited in claim 1.

In addition, Kim does not disclose, teach or even suggest a system for stabilizing a surface comprising a porous element disposed on the surface to be stabilized, and a solidified fiber matrix material incorporated within the porous element and comprising a mixture of fibers and a polymeric material, the system being made by anchoring the porous element to the surface and thereafter injecting the matrix materials into the porous element while the matrix material is in a fluid state, as recited in claim 13.

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Further, Kim does not disclose, teach or even suggest a system for stabilizing a surface prone to soil erosion which system comprises a three-dimensional fibrous erosion control blanket disposed on the surface, and a solidified matrix material bonded to and incorporated within the blanket, wherein the system is made by placing an erosion control blanket on a surface without the matrix material being incorporated within the blanket, and thereafter hydraulically applying a matrix material to the blanket while the matrix material is in a fluid state, and thereafter allowing the matrix material to solidify within the blanket, as recited in new claim 18.

Kim does not even suggest depositing or injecting a mixture of fibers and a polymeric bonding material into a porous element, as recited in claims 1 and 13, respectively.

For example, Kim's artificial soil is made up of a mixture of peat, sewage sediment, pulp sludge and granular soil. Kim's "artificial soil" is much like an organic compost which is both compositionally and functionally different and distinct from the material comprising a mixture of fibers and polymeric material, as recited in amended claims 1 and 13.

Moreover, there would have been no motivation for one of ordinary skill in the art to modify Kim's two dimensional mesh or netting to form a three-dimensional erosion control blanket, let alone to use such a three-dimensional erosion control blanket in a system as recited in new independent claim 18.

In fact, applicant submits that Kim actually teaches away from such a modification, and teaches away from the present invention. Kim's two-dimensional mesh or netting has substantial interstitial regions between wires of the net which exposes relatively large areas of the cut rock surface beneath the net. For example, as explained in column 3, lines 49-62, which describes Figs. 4a and 4b

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in Kim, the wire mesh is made of a plurality of squares or rectangles, each square of the mesh having a vertical and horizontal side of 150 cm and 150cm respectively. Kim describes and shows how it is intended that the artificial soil become bonded directly to the rock surface exposed between the mesh or netting filaments. Therefore, Kim teaches away from use of an erosion control blanket, which, as a person of ordinary skill in the art would know, does not expose any significant region of the surface underlying the blanket.

In light of the above, applicant submits that the present claims are not anticipated by and are unobvious from and patentable over Kim under 35 U.S.C. 102(b) and 103(a).

The Examiner has rejected claims 1-3, 6-7, 9 and 11-15 under 35 U.S.C. 102(b) as being anticipated by Japanese document '723. The Examiner has also rejected claims 4-5, 8, 10m and 16 under 35 U.S.C. 103(a) as being unpatentable over Japanese document '723 in view of applicant's admission of prior art. Applicant traverses each of these rejections as it pertains to the claims as amended.

Japanese document '723 teaches spraying a mixture of soil mixed with seeds into a mat that is covered with a wire pressing net.

Japanese document '723 does not disclose, teach or suggest the present invention. For example, Japanese document '723 does not disclose, teach or even suggest a method of stabilizing a surface which includes a flowable material deposited on a porous element on a surface to be stabilized wherein the flowable material comprises a mixture of fibers and a polymeric bonding material, as claimed in amended claim 1.

In addition, Japanese document '723 does not disclose, teach or even suggest a system for stabilizing a surface prone to soil erosion wherein the system comprises a porous element disposed on

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the surface to be stabilized and a solidified fiber matrix material, comprising a mixture of fibers and polymeric material, incorporated within the porous element, the system being made by anchoring the porous element to the surface and thereafter injecting the matrix material into the porous element while the matrix material is in a fluid state, as recited claim 13.

Further, Japanese document '723 does not disclose, teach or even suggest a system for controlling erosion as claimed in new claim 18. Japanese document '723 does not disclose, teach or suggest a system comprising a three-dimensional fibrous erosion control blanket disposed on a surface; and solidified matrix material bonded to and incorporated within the blanket and the system being made by placing the fibrous erosion control blanket on a surface prone to erosion without the matrix material being incorporated within the blanket, and thereafter hydraulically applying the matrix material to the blanket while the matrix material is in a fluid state and thereafter allowing the matrix material to solidify within the blanket.

Japanese document '723 teaches needle punching a mat of coconut fibers and spraying a mixture of soil mixed with seeds into the mat so that the soil/seed mixture become fixed in the apertures that have been punched in the mat.

Applicant submits that there is no motivation or incentive for a person of ordinary skill in the art to modify the aperture punched mat having within such apertures a mixture of soil and seeds of Japanese document '723 to form the systems of the present invention as now claimed.

In view of the above, applicant submits that the present claims are not anticipated by and are unobvious from and patentable over Japanese document '723 under 35 U.S.C. 102(b) and 103(a).

Furthermore, each of the present dependent claims is

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separately patentable over the prior art. For example, none of the prior art, taken singly or in any combination, disclose, teach or even suggest the present methods or systems including the additional feature or features recited in any of the dependent claims. Therefore, applicant submits that all of the present claims are separately patentable over the prior art.

In conclusion, applicant has shown that the claims are not anticipated by and are unobvious from and patentable over the prior art under 35 U.S.C. 102 and 103. Therefore, applicant submits that the present claims 1-7, 9-15, 17-22 are allowable, and respectfully requests the Examiner to pass the above-identified application to issuance at an early date. Should any matters remain unresolved, the Examiner is requested to call (collect) applicant's attorney at the telephone number given below.

Respectfully submitted,



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